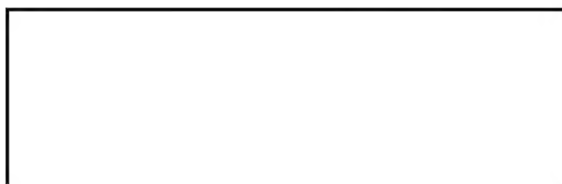


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# *Imagery Analysis Report*

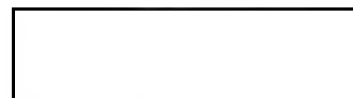
Selected Locomotive and Railroad Car Plants  
Communist China



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### SUMMARY

Comparative analysis of photography covering ten selected locomotive and railroad car plants in Communist China reveals minor expansion of the industry over the past five years. No disruptions of production activity were apparent from the photography. The plants studied include the seven present major producers of locomotives, freight cars, and passenger cars in Communist China, plus three plants which are primarily involved in repair and the manufacturing of parts.

NOTE: This report was prepared in direct support of the Central Intelligence Agency.

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Figure 4. Chang-hsing-tien Locomotive and Rolling Stock Plant, ..... 10

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[Redacted]

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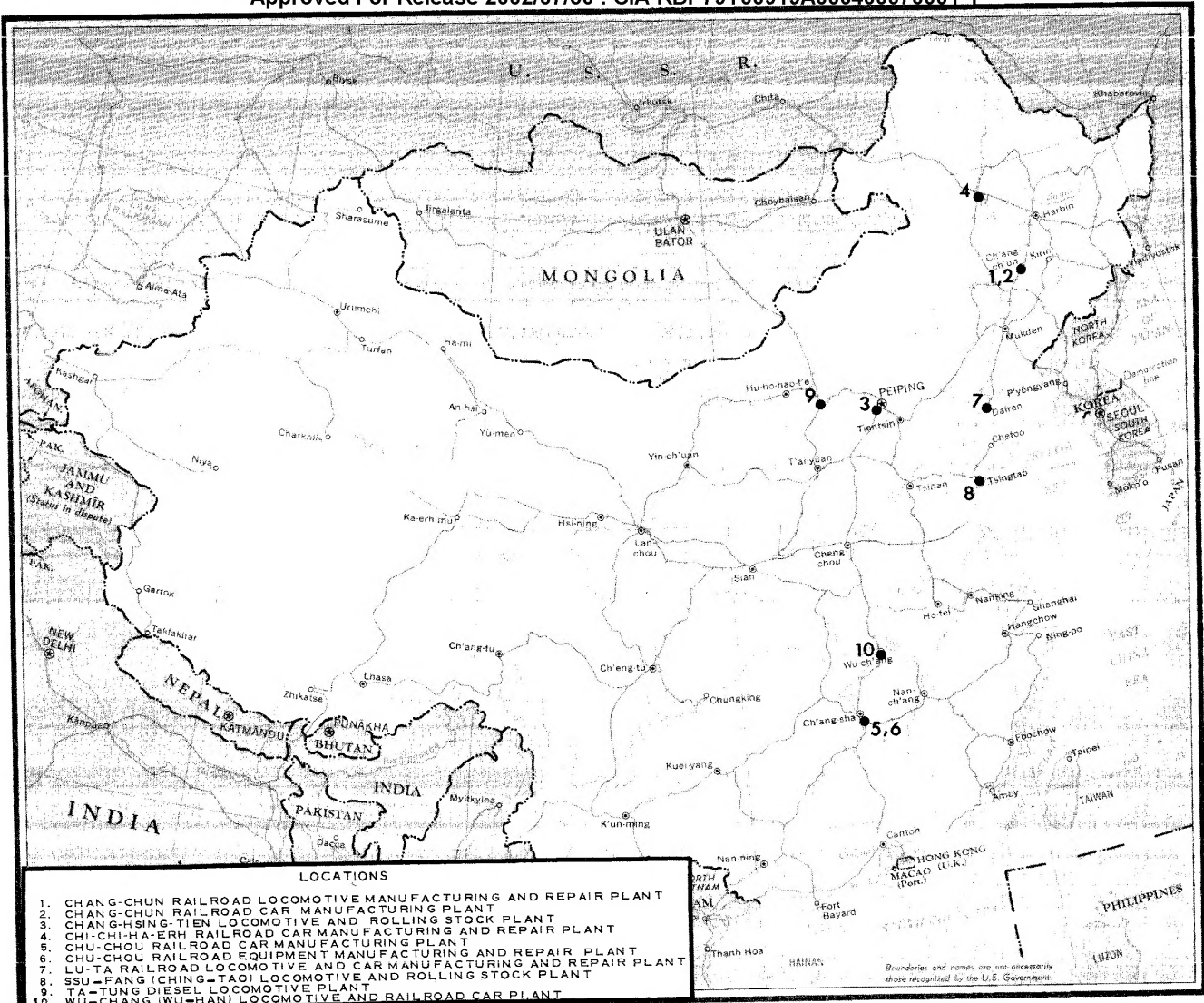


FIGURE 1. LOCATION MAP

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## INTRODUCTION

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This study of ten selected Chinese locomotive and railroad car plants is based on [redacted] photography [redacted]

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[redacted] Seven of the plants studied are the present major producing plants in this industry, while the other three plants are mainly used for repair and the manufacturing of parts. The photographs of each plant used in this report are from the latest available good-quality photography. The specific function of the buildings annotated on the photographs is found in the accompanying key to annotations. [redacted]

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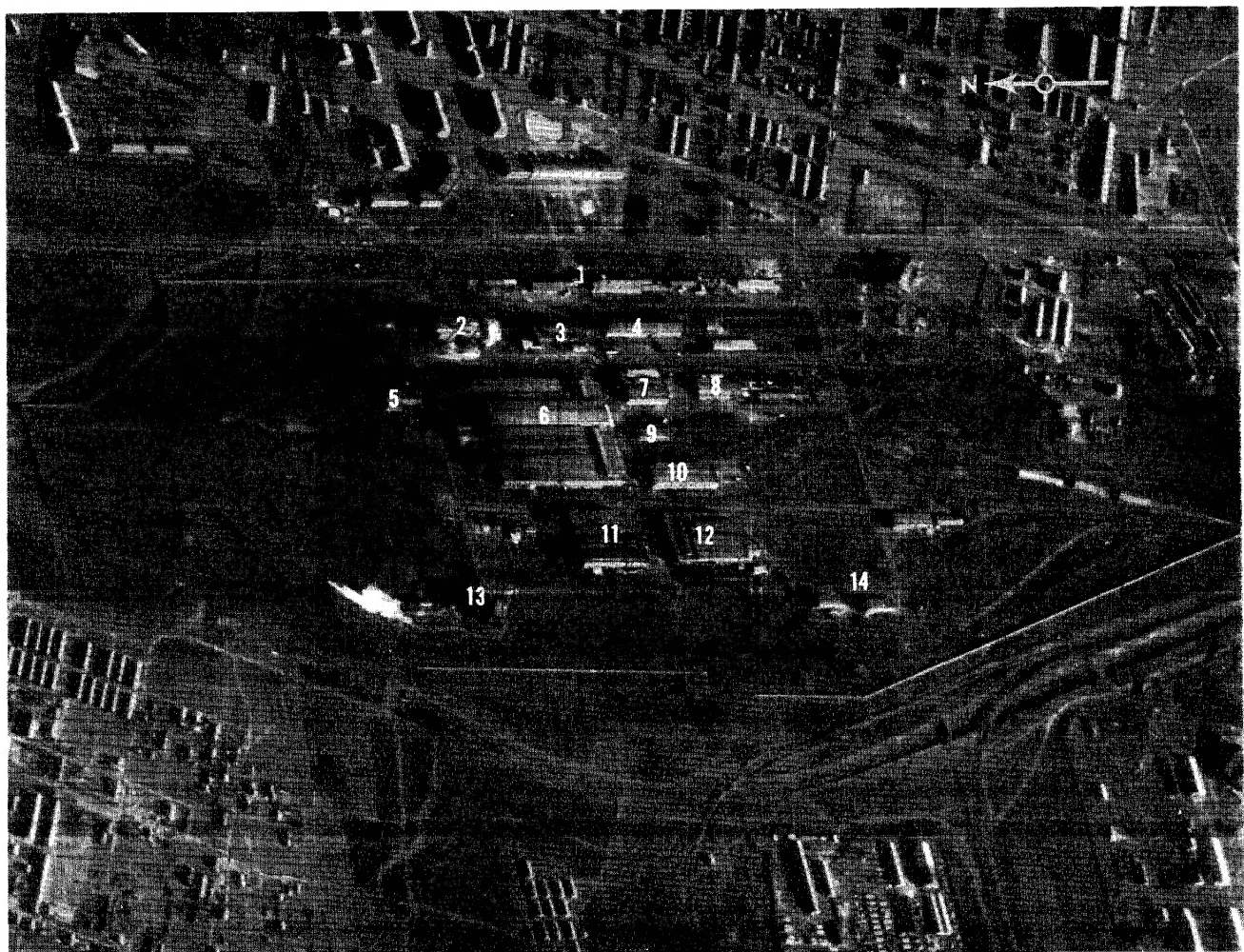


FIGURE 2. CHANG-CHUN RAILROAD LOCOMOTIVE MANUFACTURING AND REPAIR PLANT

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CHANG-CHUN RAILROAD LOCOMOTIVE MANUFACTURING AND REPAIR PLANT  
CHANG-CHUN, CHINA

The Chang-chun Railroad Locomotive Manufacturing and Repair Plant is located at 43-55-35N 125-18-36E (Figure 1, Item 1) in the northern suburbs of the city of Chang-chun. The plant is served by a good road network and by several rail spurs off the Chang-chun to Ssu-ping Rail Line.

The entire plant occupies an area of approximately 115 acres and has 491,000 square feet of roof cover. When the plant was first observed on imagery of [REDACTED] it appeared that all of the major buildings were complete. An accurate analysis of the plant could not be accomplished due to poor-quality imagery. The plant was next observed [REDACTED] and all of the major buildings were complete and in operation with the exception of Items 2, 5, and 7 which were in the early stages of construction. The construction of these three buildings continued [REDACTED] when they were first observed complete. Railcars were observed within the plant [REDACTED]

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KEY TO ANNOTATIONS

<u>Item</u>	<u>Description</u>	<u>Item</u>	<u>Description</u>
1	Support Buildings (2)	8	Workshop
2	Steam Plant	9	Workshop
3	Probable Forge Shop	10	Repair Shop
4	Warehouse	11	Foundry Shop
5	Unidentified Workshop	12	Probable Forge Shop
6	Assembly Building	13	Administration Building
7	Workshop	14	Support Buildings (2)

Note: This plant is mainly a repair facility at the present time.

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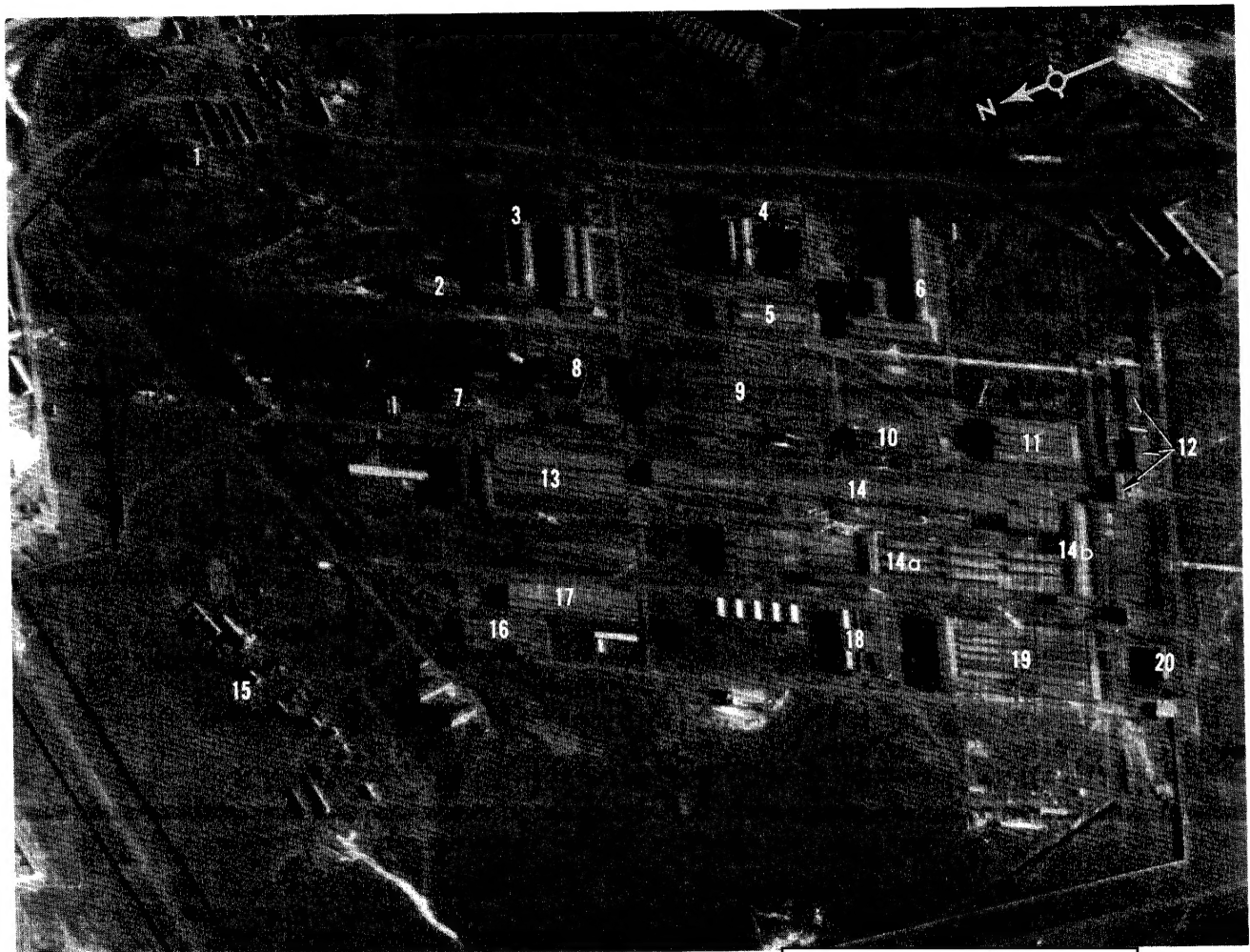


FIGURE 3. CHANG-CHUN RAILROAD CAR MANUFACTURING PLANT

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CHANG-CHUN RAILROAD CAR MANUFACTURING PLANT  
CHANG-CHUN, CHINA

The Chang-chun Railroad Car Manufacturing Plant [REDACTED] is located at 43-54-33N 125-17-40E (Figure 1, Item 2) in the northwest suburbs of Chang-chun. The plant is served by a good road network and a rail spur off the rail line extending from Chang-chun to Ssu-ping.

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The entire plant occupies an area of approximately 320 acres and has 1,410,000 square feet of roof cover. The plant was first observed on imagery [REDACTED] however, due to imagery of poor quality, an analysis of the plant could not be accomplished. When next observed in [REDACTED] all of the major facilities were complete, with the exception of two forge buildings (Items 4 and 6). The plant was operating, with numerous rail cars located within the area. When the plant was next observed [REDACTED] the two forge buildings were complete. The plant was operating each time it was observed [REDACTED]

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## KEY TO ANNOTATIONS

<u>Item</u>	<u>Description</u>	<u>Item</u>	<u>Description</u>
1	Unidentified Workshop	12	Administration Buildings (2) and a Vehicle Shed
2	Possible Sand Preparation Building	13	Assembly Building
3	Foundry	14	Machine Shop/Subassembly
4	Probable Forge Shop	14a	Assembly Section
5	Workshop	14b	Subassembly Section
6	Probable Forge Building	15	Inactive Steel Mill
7	Workshop	16	Workshop
8	Steam Plant	17	Workshop
9	Machine Shop	18	Woodworking Shop
10	Warehouse	19	Machine Shop/Subassembly Building
11	Workshop	20	Workshop

Note: This plant is presently producing passenger cars.

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FIGURE 4. CHANG-HSING-TIEN LOCOMOTIVE AND ROLLING STOCK PLANT

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CHANG-HSING-TIEN LOCOMOTIVE AND ROLLING STOCK PLANT  
CHANG-HSING-TIEN, CHINA

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The Chang-hsing-tien Locomotive and Rolling Stock Plant [REDACTED] is located at 39-49N 116-11E (Figure 1, Item 3) approximately 11 nautical miles southwest of the city of Peking. The plant is served by a good road network and a rail spur off the rail line extending from Peking to Liu-li-ho.

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The entire plant occupies an area of approximately 70 acres and has 489,000 square feet of roof cover. The plant was first observed on imagery [REDACTED]. However, due to poor-quality imagery, an analysis of the facilities could not be accomplished. When the plant was next observed [REDACTED] all of the major facilities were complete. The plant appeared to be operating with numerous rail cars observed throughout the entire area.

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From a comparison of available imagery [REDACTED] no additional construction activity was noted. The plant appeared to be operating when observed on all available imagery.

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KEY TO ANNOTATIONS

<u>Item</u>	<u>Description</u>	<u>Item</u>	<u>Description</u>
1	Assembly Building	5	Support Area
2	Machine Shop	6	Forge Building
3	Workshop	7	Steam Plant
4	Foundry		

Note: This plant is mainly a repair facility at the present time.

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FIGURE 5. CHI-CHI-HA-FEN RAILROAD CAR MANUFACTURING AND REPAIR PLANT,

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CHI-CHI-HA-ERH RAILROAD CAR MANUFACTURING AND REPAIR PLANT  
CHI-CHI-HA-ERH, CHINA

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The Chi-chi-ha-erh Railroad Car Manufacturing and Repair Plant [redacted] is located at 47-20-55N 124-00-50E (Figure 1, Item 4) within the city of Chi-chi-ha-erh, China. The plant is served by an excellent road network and several rail spurs.

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The entire plant occupies an area of approximately 330 acres and has 1,630,000 square feet of roof cover. When the plant was first observed on imagery [redacted] all of the major buildings were complete, and no construction activity was noted. Imagery [redacted] revealed a new workshop (Item 28) under construction. When the plant was next observed [redacted] the construction of the workshop (Item 28) was suspended, and a workshop (Item 1) was undergoing repairs. There was no construction activity noted until [redacted] a new saw mill (Item 13) and an addition to the forge and foundry were observed under construction. When observed [redacted] the workshop (Item 28) was then complete.

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[redacted] When the plant was last observed [redacted] the workshop (Item 1) was still under construction.

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KEY TO ANNOTATIONS

<u>Item</u>	<u>Description</u>	<u>Item</u>	<u>Description</u>
1	Workshop	18	Warehouse
2	Foundry	19	Administration Building
3	Administration Building	20	Workshop
4	Warehouse	21	Steam Plant
5	Workshop	22	Forge Building
6	Warehouse	23	Possible Forge Building
7	Assembly and Final Check-out Building	24	Administration Building
8	Warehouse	25	Warehouse
9	Workshop	26	Workshop
10	Workshop	27	Probable Foundry
11	Forge Building	28	Workshop
12	Possible Saw Mill and Wood Drying Kilns	29	Producer Gas Plant
13	Saw Mill	30	Forge and Foundry Building
14	Warehouse/Workshop	31	Forge Building
15	Workshop	32	Railroad Car Repair Shop
16	Workshop	33	Foundry Building
17	Workshop	34	Warehouse

Note: This plant is presently producing freight cars.

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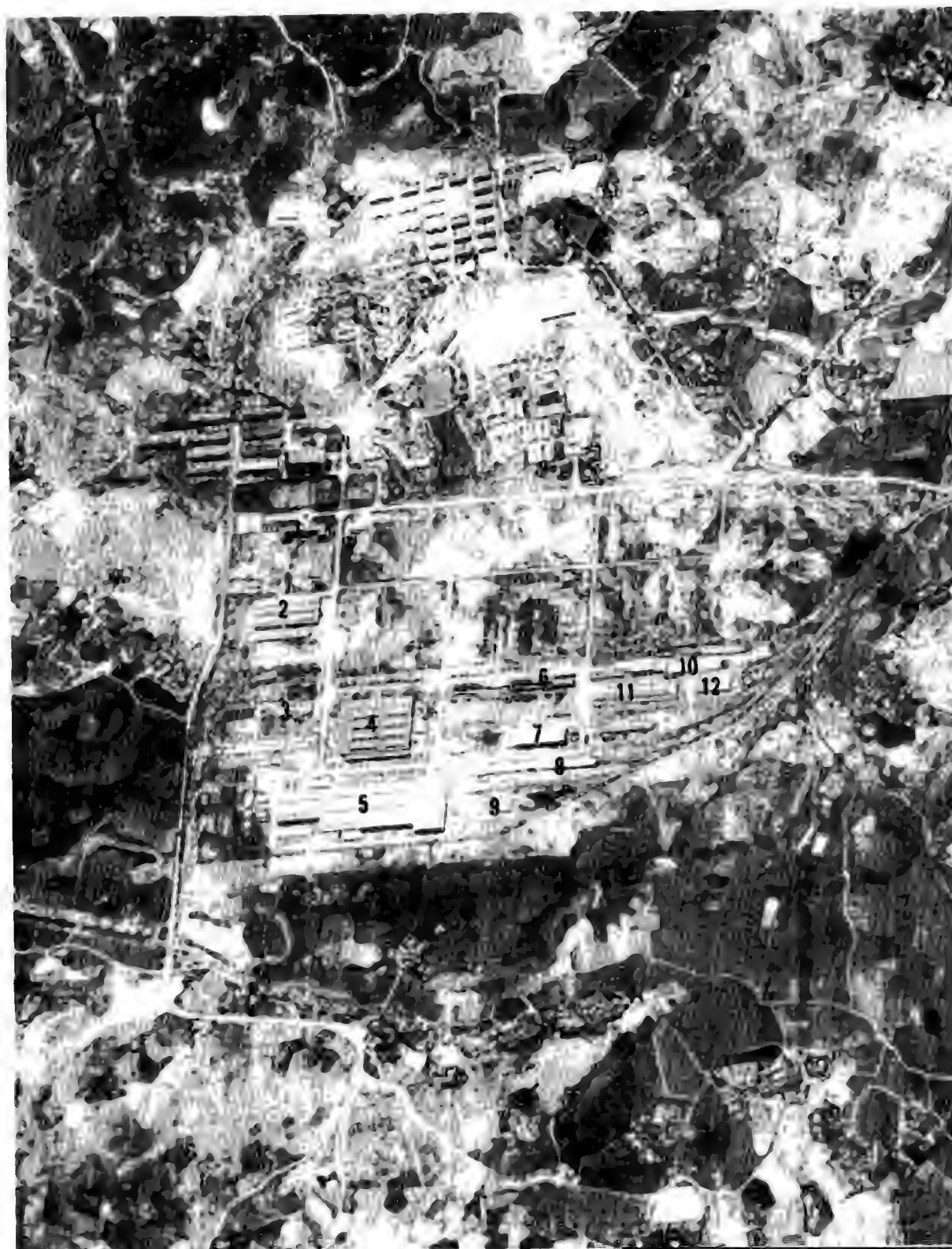


FIGURE 6. CHU-CHOU RAILROAD CAR MANUFACTURING PLANT

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CHU-CHOU RAILROAD CAR MANUFACTURING PLANT  
CHU-CHOU, CHINA

The Chu-chou Railroad Car Manufacturing Plant is located at 27-53-00N 113-12-00E (Figure 1, Item 5) approximately 4 nautical miles northeast of the city of Chu-chou. The plant is served by a good road network and a 3-nautical-mile rail spur from the Chu-chou to Hsiang-tan Railroad.

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The entire plant occupies an area of approximately 140 acres and has 515,000 square feet of roof cover. When the plant was first observed on imagery [REDACTED] 90 percent of the area was obscured by heavy clouds. Only one warehouse (Item 2) could be observed and was complete. When next observed [REDACTED] the area that was previously obscured by clouds was clear, revealing the existence of five additional buildings (Items 1, 3, 4, 6, and 11). It is impossible to determine whether or not these five buildings had existed on the earlier imagery [REDACTED] Imagery [REDACTED] revealed the plant in operation. Numerous railroad cars were observed throughout the plant area. Construction then halted [REDACTED] when a new addition to the final check-out building (Item 6) and the construction of a new warehouse (Item 12) were observed.

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[REDACTED] At the present time only approximately 50 percent of the plant area is being used, leaving the other half of the area for later expansion. The road network for this portion has already been constructed. The plant was operating on all imagery [REDACTED]

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KEY TO ANNOTATIONS

<u>Item</u>	<u>Description</u>	<u>Item</u>	<u>Description</u>
1	Administration Building	7	Workshop
2	Warehouse	8	Final Check-out Building
3	Forge Building	9	Possible Steam Plant
4	Final Assembly Building	10	Warehouse
5	Final Assembly Building	11	Warehouse
6	Final Check-out Building	12	Warehouse

Note: This plant is presently producing freight cars.

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FIGURE 8. LU-TA RAILROAD LOCOMOTIVE AND CAR MANUFACTURING AND REPAIR PLANT,

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LU-TA RAILROAD LOCOMOTIVE AND CAR MANUFACTURING  
AND REPAIR PLANT  
LU-TA, CHINA

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The Lu-ta Railroad Locomotive and Car Manufacturing and Repair Plant is located at 38-55-10N 121-34-25E (Figure 1, Item 7) within the city of Lu-ta. The plant is served by a good road network and several railroad spurs.

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The entire plant occupies an area of approximately 250 acres and has 1,255,000 square feet of roof cover. The plant was complete and in operation when first observed. Numerous railroad cars of various types were scattered throughout the plant. no construction activity was noted. However, analysis of imagery revealed that approximately 30 percent of the possible final check-out building (Item 26) was dismantled and that a new final check-out building (Item 27) was constructed. The plant was operating when last observed.

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KEY TO ANNOTATIONS

<u>Item</u>	<u>Description</u>	<u>Item</u>	<u>Description</u>
1	Workshop	16	Final Check-out Building
2	Assembly Building	17	Possible Machine Shop
3	Warehouse	18	Foundry
4	Forge Building	19	Possible Machine Shop
5	Warehouse	20	Warehouse
6	Workshop	21	Steam Plant
7	Possible Foundry	22	Possible Assembly Building
8	Final Check-out Building	23	Assembly Building
9	Warehouse	24	Assembly Building
10	Warehouse	25	Assembly Building
11	Possible Machine Shop	26	Possible Final Check-out Building
12	Workshop	27	Final Check-out Building
13	Foundry	28	Forge Building
14	Subassembly Building	29	Substation
15	Assembly Building	30	Steam Plant

Note: This plant is presently producing freight cars and locomotives.

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